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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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James F. Arnold

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EXAMINER

DIVECHA, KAMAL B

ART UNIT

PAPER NUMBER

2151

DATE MAILED: 05/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/518,753	<b>Applicant(s)</b> ARNOLD ET AL.	
	<b>Examiner</b> KAMAL B. DIVECHA	<b>Art Unit</b> 2151	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-6,9-20 and 34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6,9-20,34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**Response to Arguments**

Claims 1-6, 9-20 and 34 are pending in this application.

Applicant's arguments with respect to claims 1-6, 9-20 and 34 have been considered but are moot in view of the new ground(s) of rejection.

Please note: In response to applicant's argument (remarks, page 9) that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., transmission of objects that include functionality, e.g. methods that operate on data, in addition to data) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

**Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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1. Claims 1-4, 6 and 9-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lathrop (U. S. Patent No. 5,701,427) in view of Barker et al. (hereinafter Barker, U. S. Patent No. 5,931,916).

As per claim 1, Lathrop discloses a method for transmitting a packet of data from a first computing system to a second computing system, the first computing system and the second computing system being included in a client/server object-based computing system (simply interpreted as client/server architecture), wherein the first computing system is a server and the second computing system is a client (see fig. 1), the method comprising: identifying the packet of data using the first computing system, wherein said second computing system is listening (fig. 2 item #36, 37 and 34; col. 5 L33-49), wherein the packet of data includes data which represents an object in the client/server object-based computing system (i.e. data or information or item in a message in a client/server architecture), the object been identified as an object which the second computing system has an interest in receiving updates (col. 5 L33-66); attempting to send the packet of data from the first computing system to the second computing system (fig. 2 item #32, 38; fig. 7A and 7B) and determining when the packet is received by the second computing system (fig. 7A item #260-262 and fig. 7B item #263-264), however Lathrop does not disclose the process of sending an acknowledgement from the second computing system to the first computing system when it is determined that the packet of data is received by the second computing system, the acknowledgement being arranged to indicate that the packet of data is received by the second computing system.

Barker, from the same field of endeavor, explicitly discloses the process of sending an acknowledgement from the second computing system to the first computing system when it is

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determined that the packet of data is received by the second computing system, the acknowledgement being arranged to indicate that the packet of data is received by the second computing system (col. 6 L20-27, L59-66, col. 7 L24-29).

Therefore it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to incorporate the teaching of Barker as stated above with Lathrop, in order employ the process of sending an acknowledgement from the client to the server when it is determined that the packet is received by the client and to indicate that the packet is received by the client.

One of ordinary skilled in the art would have been motivated because by using acknowledgments, retransmission, sequence numbers, etc., reliability of data transfer between data processes on separate nodes would have been achieved (Barker, col. 6 L10-13).

As per claim 2, Lathrop discloses the process of re-attempting to send the packet of data from the first computing system to the second computing system when it is determined that the packet of data is not received by the second computing system (col. 2 L2-20; col. 7 L20-25).

As per claim 3, Lathrop discloses the process wherein re-attempting to send the packet of data does not include attempting to establish communications between the first computing system and the second computing system (col. 15 L35 to col. 16 L16).

As per claim 4, Lathrop discloses the process of determining when the re-attempt to send the packet of data is successful, wherein when it is determined that the re-attempt to send the packet of data is not successful, an attempt is made to establish communications between the first computing system and the second computing system (col. 20 L4 to col. 22 L14 and fig. 6A-7B; col. 19 L57 to col. 20 L31).

As per claim 6, Lathrop discloses the process of placing the packet of data in a queue using the first computing system, and removing the packet of data from the queue using the second computing system (col. 22 L49-63), however Lathrop does not disclose the process wherein the queue is arranged to prioritize the packet of data with respect to any packets of data associated with the queue.

Barker, from the same field of endeavor discloses the system wherein the queue is arranged to prioritize the packet of data with respect to any packets associated with the queue (col. 8 L51-60).

Therefore it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to modify Lathrop in view of Barker in order to prioritize the packet of data associated with the queue.

One of ordinary skilled in the art would have been motivated so that the high priority data are transferred are forwarded or transferred first.

As per claim 9, Lathrop discloses a method for transmitting a packet of data from a first computing system to a second computing system, the first computing system and the second computing system being included in a client/server object-based computing system, wherein the first computing system is a server and the second computing system is a client (see fig. 1), the method comprising: attempting to send the packet of data from the first computing system to the second computing system, wherein said second computing system is listening, wherein the packet of data includes data which represents an object in the client/server object-based computing system (fig. 2 item #32, 38; fig. 7A and 7B), the object been identified as an object which the second computing system has an interest in receiving updates; determining when the

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packet is received by the second computing system (fig. 7A item #260-262 and fig. 7B item #263-264); and assuming that packet losses have occurred when it is determined that the packet of data is not received by the second computing system (col. 7 L20-41), wherein assuming that packet losses have occurred includes repeating a) and b) for up to predetermined maximum number of times (col. 9 L49-66), however Lathrop does not disclose the process of identifying the packet of data as being successfully sent when it is determined that the packet of data is received by the second (i.e. by sending an acknowledgement message to the sender).

Barker, from the same field of endeavor, explicitly discloses the process of sending an acknowledgement from the second computing system to the first computing system when it is determined that the packet of data is received by the second computing system, the acknowledgement being arranged to indicate that the packet of data is received by the second computing system (col. 6 L20-27, L59-66, col. 7 L24-29).

Therefore it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to modify Lathrop in view of Barker in order to employ the process of sending an acknowledgement from the client to the server when it is determined that the packet is successfully received by the client.

One of ordinary skilled in the art would have been motivated because of the same reasons as set forth in claim 1.

As per claim 10, Lathrop discloses the process of repeating the process of a) and b) until it is determined that the packet of data is successfully sent (col. 12 L2-15).

As per claim 11, Lathrop discloses the process wherein a time differential between each attempt at repeating a) and b) is determined using the statistical information including at least

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one measurement of an amount of time elapsed for another packet of data to be sent and received (col. 12 L2-41, col. 14 L40-53, col. 20 L54 to col. 21 L19).

As per claim 12, Lathrop discloses the process wherein a) and b) have repeated a predetermined number of times, at least one attempt is made to establish a connection between the first computing system and the second computing system (col. 19 L33 to col. 20 L53).

As per claim 13, Lathrop discloses the process of determining when the at least one attempt to establish the connection between the first computing system and the second computing system is successful, wherein when it is determined that the at least one attempt to establish the connection is successful, a) and b) are repeated (col. 19 L33 to col. 20 L55 and col. 18 L25-30).

As per claims 14-20, they do not teach or further define over the limitations in claims 1-4, 6 and 9-13. Therefore claims 14-20 are rejected for the same reasons as set forth in claims 1-4, 6 and 9-13.



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2. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lathrop (U. S. Patent No. 5,701,427) in view of Barker et al. (hereinafter Barker, U. S. Patent No. 5,931,916), and further in view of Whalen et al. (hereinafter Whalen, U. S. Patent No. 5,948,066).

As per claim 5, Lathrop in view of Barker discloses the process of establishing a connection between the first computing system and the second computing system before identifying the packet of data (Lathrop, fig. 6A item #200-202 and fig. 1), however Lathrop in view of Barker does not disclose the connection being a wireless connection.

Whalen, from the same field of endeavor discloses a system and a method for delivery of information over the narrow-band communications link i.e. a wireless link (see abstract, fig. 1, fig. 3; col. 2 L16-40).

Therefore it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to incorporate the teaching of Whalen as stated above with Lathrop in view of Barker, in order to employ a mechanism for delivering data over a wireless connection.

One of ordinary skilled in the art would have been motivated so that the requests and responses would have been exchanged between the mobile client and the fixed server over a narrow-band communications link (Whalen, col. 3 L19-26).

3. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lathrop (U. S. Patent No. 5,701,427) in view of Barker et al. (hereinafter Barker, U. S. Patent No. 5,931,916), and further in view of Herz et al., (hereinafter Herz, U. S. Patent No. 5,835,087).

As per claim 34, Lathrop discloses a method for transmitting a packet of data from a first computing system to a second computing system, the first computing system and the second computing system being included in a client/server object-based computing system, wherein the first computing system is a server and the second computing system is a client (see fig. 1), the method comprising: identifying the packet of data using the first computing system, wherein said second computing system is listening (fig. 2 item #36, 37 and 34; col. 5 L33-49), wherein the packet of data includes data which represents an object in the client/server object-based computing system (i.e. data or information), the object been identified as an object which the second computing system has an interest in receiving updates (col. 5 L33-66); attempting to send the packet of data from the first computing system to the second computing system (fig. 2 item #32, 38; fig. 7A and 7B) and determining when the packet is received by the second computing system (fig. 7A item #260-262 and fig. 7B item #263-264), however Lathrop does not disclose the process of sending an acknowledgement from the second computing system to the first computing system when it is determined that the packet of data is received by the second computing system, the acknowledgement being arranged to indicate that the packet of data is received by the second computing system and the object being represented in an object list in the first computing system, the object list arranged to include objects that are to be updated, and the object being represented in a filter tree which is arranged to identify objects that the second computing system has an interest in.

Barker, from the same field of endeavor, explicitly discloses the process of sending an acknowledgement from the second computing system to the first computing system when it is determined that the packet of data is received by the second computing system, the acknowledgement being arranged to indicate that the packet of data is received by the second computing system (col. 6 L20-27, L59-66, col. 7 L24-29).

Therefore it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to incorporate the teaching of Barker as stated above with Lathrop, in order employ the process of sending an acknowledgement from the client to the server when it is determined that the packet is received by the client and to indicate that the packet is received by the client.

One of ordinary skilled in the art would have been motivated because of the same reasons as set forth in claim 1, however Barker does not disclose the process wherein the object is represented in an object list in the first computing system, the object list arranged to include objects that are to be updated, and the object also being represented in a filter tree which is arranged to identify objects that the second computing system has an interest in.

Herz, from the same field of endeavor, discloses the process wherein the objects are represented in an object list in a server, the object list arranged to include objects that are to be updated and represented in a filter tree to identify objects that the client has an interest in (fig. 3-4, fig. 8-9, col. 24 L13-66, fig. 13A and col. 25 L5-48).

Therefore it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to modify Lathrop in view of Barker, and further in view of Herz, in order to employ an object list in a server and further objects being represented in a filter tree that

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are to be updated and wherein the client has an interest in, since Herz teaches the process of forming a filter tree and an object list at the server, which the client has an interest in.

One of ordinary skilled in the art would have been motivated because it would have employed a mechanism wherein the system would have been able to search efficiently for the target objects in a filter tree (Herz, col. 25 L5-10).

#### **Additional References**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Carr, U. S. Patent No. 4,718,002.
- b. Doshi et al., U. S. Patent No. 5,550,848.
- c. Neches, U. S. Patent No. 5,276,899.
- d. Jain et al., U. S. Patent No. 5,377,327.

#### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KAMAL B. DIVECHA whose telephone number is 571-272-5863. The examiner can normally be reached on Increased Flex Work Schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zarni Maung can be reached on 571-272-3939. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kamal Divecha  
Art Unit 2151  
May 13, 2006.

Khanh Dnh  
Primary Examiner